## Remarks/Arguments

**1. Reasons for the filing of the RCE**

The first office action sent Jan. 31, 2003 did not include a reference citation for the most crucial and relevant prior art reference –Mitchell (Pat.#6,370,857). The objections presented were based solely on 35 U.S.C. 112. The issue of having to still overcome some prior art was nevertheless also considered but based only on the references cited in the first OA. The applicant was given three months to respond and amend the application based on the objections. Of course, in light of the new reference cited only in a telephonic interview, the amendments submitted in response to the first OA are now unsatisfactory.

Succeeding communication between the Examiner and the applicant was telephonic. The response time given the applicant between her knowledge of the intervening prior art and the agreement to the Examiner's amendment was so short that she could not come up with the necessary arguments to support a broader main claim. One day does not suffice to allow an applicant to come up with a valid and comprehensive response to claim objections and/or rejections which is something that is usually accomplished within a statutory period of three months. If the applicant has not had enough time to diagnose, analyze, and turn over the prior art beforehand, it would be very difficult to come up with enough material to convince the Examiner in a telephonic interview.

The applicant is very grateful for the claim writing assistance given by the Examiner pursuant to MPEP 707.7(j) and consequently for the allowance of several Examiner-amended claims. After looking over the intervening Mitchell patent in a more relaxed atmosphere, under no tight time pressure, that is, the applicant thinks that the allowed claims are narrower and fewer than what the applicant is entitled to even if writing assistance was needed. It is not difficult to get around (not infringe) the allowed main claim as will be explained later. Granting that one can expect only so much assistance pursuant to MPEP 707.7(j),

it could still be possible that if an applicant is able to write stronger claims patterned after the Examiner's amendments and some of the claims from the references cited, more claims could be allowed. After all, as long as the necessary elements are in place, there should be no difference in the technical validity between claims written by a pro se applicant and those written by a patent attorney. Ideally, writing assistance should not be a hindrance in granting an applicant an equitable entitlement to an invention. The manner in which the Examiner wrote the amended claims form the basis of the claims written by the applicant. The applicant could not have this far in claim writing without the help of the Examiner. If ever assistance is still needed, it will now be minor.

An RCE is an opportunity for the applicant to present more arguments that could persuade the Examiner into allowing more claims for a more equitable resolution. As the Examiner will later understand, an ordinary pro se applicant cannot accomplish all these argumentation in a time-constrained telephonic interview even if he/she can come up with all the ideas overnight. The work presented heretofore is a product of several weeks' worth of intermittent brainstorming and included a consultation with a patent attorney for professional advice. The Examiner, likewise, might need to ponder over this work for a while before being finally decided on the broadest claim/s allowable.

**The applicant is going to argue towards the patentability of a stronger and broader coverage for the non-detachable version and also for the patentability of the completely detachable versions of the present invention. Both versions can be covered by the same main claim without infringing on prior art. Therefore, all arguments presented towards the patentability of the new main claim holds for both versions of the picking rake.**

It is also necessary to include another independent claim for the rake handle because it is not independent and not distinct from the picking rake. **According to MPEP 802.02, non-independent and non-distinct inventions should not be subject to restriction.** The applicant's original set of claims and those submitted in response to the first OA included separate independent claims for the handle. This independent claim will be deemed obvious in view of the

present invention and if filed separately, as in a divisional patent, could jeopardize the parent claim for double patenting. Even if there could be other ways to avoid double patenting, including this claim in this invention now will greatly simplify the overall examination process. It will save the USPTO and the pro se applicant a great amount of time and effort by obviating the filing of a new application, appeals, or petitions.

Amendments effecting the consistency of terms used in the claims and in the specifications are also needed.

In the least, the arguments presented will augment and support the Examiner's position as to why the present invention is patentable over the prior art and may be used perhaps in the future for other purposes.

Therefore, in view of the above, the applicant respectfully requests for the continued examination of the present invention in light of the arguments that follow.

**Claim Amendments Remarks/Arguments**

At this stage in the prosecution, the applicant finds it worthwhile to include arguments regarding the novelty and unobviousness of the present invention over Mitchell. The applicant did not have an opportunity to include comments on Mitchell's patent in her response to the first OA.

**Novelty:**

**A rejection based on 35 U.S.C. 102 (e), ( a claim is anticipated by the reference), is to be overcome.**

Under this law, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

**Claim 57** – Examiner's Amendment includes the following elements:

a) first rake unit having a first rake head and a first rake handle,

b) second rake unit having a second rake head and a second rake handle,
c) each rake head has an external side and an inner side,
d) each rake head has an upper end and a lower end having a plurality of prongs,
e) each rake handle has an upper end and a lower end,
f) first grip handle attached to the first rake handle on a plane parallel to plane of prongs,
g) second grip handle attached to the second rake handle on a plane parallel to plane of prongs,
h) first grip handle has a first portion,
i) second grip handle has a second portion,
j) one of the first and second portions has a first connecting means for holding the right and left rake units in a side by side relationship along their inner sides,
k) the lower ends of the first and second rake handles are removably connected to the respective upper ends of the first and second rake heads,
l) one of the upper ends of the first and second rake heads has an aperture through which a second connecting means is extended for flexibly and pivotally holding and connecting the first and second rake handles, and
m) at least one of the first and second grip handles are located at a midsection of one of the first and second rake handles, substantially remote from the upper ends of the first and second rake heads.

This brings us to Mitchell's patent # 6,370,857. This patent teaches the following:

a) a first rake part having a handle and a first rake head section with a tubular member for receiving the handle,
b) a second rake part, having a second rake head with an attached semi-cylindrical member to cover and fit onto the tubular member and/or a portion of the handle,
c) the semi-cylindrical member forms a handle for the second rake part,
d) cooperating connecting means on both rake parts to detachably connect the second rake part to the first rake part to have the first and second rake head

sections side-by-side forming a full size, rake head at one end of the handle, the cooperating means comprising:

a) a semi-circular rib formed on an inner surface of the semi-cylindrical member, positioned and sized to snap over a portion of the handle just above the tubular member of the first rake part,

b) a hook on the first rake part and an opening on the second rake part,

e) abutment means for preventing rotation of the second rake part clockwise about the first rake part when the parts are connected together comprising:

a) flanges on the inner side walls of the first and second rake parts resting against each other,

b) a hook on the first rake part and an opening on the second rake part, the hook and opening space apart laterally from the longitudinal axis of the handle, the hook abutting on the second rake part,

f) aligning means on the rake parts to align the rake parts longitudinally when connected together comprising: the inner side walls of the first and second rake parts are complementary and abut when the rake parts are connected together.

**Elements (f) through (m) of claim 57 are neither expressly nor inherently described in the Mitchell patent.** Elements (f) through (i) and (m) consisting of the grip handles and their elongated portions do not have an equivalent in Mitchell's invention. According to Webster's Third New International Dictionary, a handle is a part that is designed to be grasped by the hand or that may be grasped by the hand (as for lifting or steering). By this definition, elements (f) through (i) describe a handle. This is supported in the drawings and specifications. The elongated member connecting the rake head and the hand grip in the second rake unit is by itself not a handle in the strict sense of the word. The user is not meant to grasp this connecting member in either the raking mode or picking mode. The hand grip is designed for that purpose. The elongated member is not grasped by the hand because the hand grip is in the way. For this reason, the elongated member and the hand grip are inseparable regardless of how the hand grip is attached to

the elongated member (applicant's disclosure show that the elongated member and the hand grip and a

rm leverages can be fabricated as one piece). Both of them define the handle. The elongated member of the handle is simply a means to dispose the grasping section to a certain point above the upper end of the rake head, an important function because it allows the user to stay upright (no stooping) while picking yard debris. Take the case of a teapot that has a handle and a spout. One can easily hold and tilt the teapot by its handle and pour out contents through the spout. Or one can ignore the handle and grasp the entire trunk or body of the teapot and tilt the body to pour out the contents through the spout. Just because the same end result is accomplished either way (although the latter was more awkward and cumbersome), that does not make the real teapot handle useless and not fit to be considered a handle. It still is the handle even if the user chooses to hold the teapot another way. Just like the body of the teapot, the elongated member was not designed to be grasped, therefore cannot by itself be called a handle.

Having clarified what the handle of the present invention really is, is this handle now equivalent to Mitchell's handle? The answer is no. **To be equivalent, the handle of the present invention should perform the same function in the same way to achieve the same result**. The elongated member and the hand grip that comprise the handle of the present invention is not equivalent to Mitchell's handle. Although Mitchell deliberately did not recite the word " handle" for the second rake part in his main claim, a "handle" inherently exists because the same claim recites, " ... the detached rake parts being useful to grasp between them and transfer the pile of debris." How can one use the detached second rake part for grasping debris without itself being grasped by the user first? Or how can one detach it from the first rake part without grasping it somewhere? If there is nothing to hold on to, the invention would not be able to perform the task that has rendered it patentable in the first place. Without a grasping member for the second rake part the main claim does not recite any operative complete assemblage. The rake parts cannot be detached and without a detachable side-by-side rake head arrangement, the Mitchell main claim might not have been allowed. It would just be like any ordinary rake. The main claim has to imply the existence of a handle for the second rake part.

For purposes of comparison, the applicant will use the semi-cylindrical member as Mitchell's second rake handle because this is the part that is most likely to be grasped during the detaching and attaching operation. There is also another grasping handle on the rake head itself which is an extra opening designed for that purpose as well. As a matter of fact, absent any specified grasping member, the second rake part can be grasped anywhere other than the semi-cylindrical member. It can even be held upside down. However, that "anywhere handle" will not be compared with the present invention's handle because the differences between them will be even more pronounced, obviously non-equivalent. A comparison table for the second rake handles of Mitchell and the present invention is shown below:

| | Mitchell | Present invention |
|---|---|---|
| I. | | |
| first function | for grasping when detaching and connecting | for grasping when detaching and connecting |
| way of achieving first function | lifting up the upturned rear end of the handle normal to the other handle while holding still the other rake part | grasping both handles and "snapping" them off sideways in the first and second versions and pushing one handle forward and pulling the other handle backward for other versions, all parallel to the longitudinal axis of the handles |
| first results | detached rake part | detached rake part |
| II. | | |

| | | |
|---|---|---|
| second function | for grasping when picking yard debris | for grasping when picking yard debris |
| way of achieving second function | the longitudinal axis of the handle is perpendicular the body of the user. The user has to reposition his grasp from the detaching operation before picking | the longitudinal axis of the grasped handle member is substantially parallel to the body of the user. The user did not have to reposition his/her grasp from the previous detaching operation. He/she stays upright while picking |
| second results | yard debris is picked, health of the back of the user is compromised, the hand of the user is strained | yard debris is picked, the back of the user is not compromised, the hand if the user is not strained |
| III. | | |
| third function-raking | none | for grasping when picking and raking. |
| way of achieving third function | none, handle is too remote from the user | the handle is within arm's reach of the user during raking and picking. |
| third results | no benefit over using a regular rake | less fatigue for the user over a regular rake because the orientation of the handle facilitates the lifting and pulling motions in raking. |

| | | |
|---|---|---|
| IV. | | |
| fourth function | housing for a connecting means | housing for a connecting means |
| ways to achieve fourth function | a semi-circular rib formed on the inner surface of the semi-cylindrical handle to snap onto the other handle with its opening in line with the raking motion. | attachment point for a first resilient member that snaps onto the other handle with its opening perpendicular to the raking motion. |
| fourth result | connects first and second rake parts | connects first and second rake units |
| V. | | |
| fifth function | aligning means | aligning means |
| ways to achieve fifth function | the user stoops over or pulls the first rake head closer to see better and then fits the hook into the opening and rotates the second rake head counterclockwise until the second handle fits over the tubular member – in short, the aligning is done after the connecting | the user stays upright, slaps the two rake heads together, aligns the grip handles, and snaps the units together |
| result | the user has to stoop over and | the user does not have to |

| | |
|---|---|
| perform a connecting operation before alignment is achieved | stoop because the hand grips are within easy sight and reach while the user is upright |

So, therefore, in addition to being structurally different, the second handle of the present invention is not equivalent to Mitchell's second handle on at least five counts. The same arguments can be presented with regard to the definition of handle for the first rake handle. The first hand grip is an integral, inseparable part of the first rake handle.

One can argue that despite the presence of the hand grip and its being in the way, what will deter the user from using just the elongated member during the raking, detaching and picking process that will differentiate it further from Mitchell?

In the raking and picking process, the user, of course, still has the option to inconvenience himself/herself by using the elongated member like the handle of Mitchell's invention. It's just like using the body of the teapot instead of the teapot handle. The difference is found in the detaching and connecting operation. Based on the difference presented in the first function from the table above, one cannot detach and connect the elongated member in the same way as the Mitchell handle because the operation involves motion in different directions even if only the elongated members are grasped. Lifting the elongated member of the second rake handle normal to the other rake handle is not possible. **The connecting means of the present invention are such that they obstruct movement in the very direction that Mitchell teaches for his detaching and connecting operation. To force detachment of the elongated members the same way as Mitchell will damage all of the connecting means disclosed in the present invention. In other words, what Mitchell teaches as a detachment advantage is what the present invention teaches as a connection advantage or stated differently, a detachment disadvantage. They not only teach different ideas, they teach opposite ideas.**

The inventions we are comparing involve not just the manner of raking and picking. Those are usually standard or conventional. We "rake" leaves into a pile. Then we grasp as much as we can between two holding means, like our hands, and then lift and

drop the grasped leaves into a receptacle. Prior art is replete with inventions that are patents in-force at the same time that can be used to rake and grasp – mostly where one head is situated over another head and opened up by some means along one direction to pick up debris. Their ideas are basically the same, set apart only by the differences in their connecting means – different enough to be granted separate patents. Examples of some pairs of patents that support this observation are: Gascon (Pat.# 4,292,794)(1981) and Fiorentino (Pat.# 4,037,397)(1977); Hsu (Pat.#6,272,827(2001) and Tolliver (Pat.# 5,303,536)(1994); Bricker et al.(Pat.# 5,564,267)(1996) and Dirksen (Pat.# 4,991,386)(1991); and Hsu (Pat.# 5,927,058)(1999) and Darnell (Pat.# 5440,868)(1995).

Gascon, Fiorentino, Hsu, and Tolliver all have main and auxiliary rake heads completely overlapping in the raking position and made to open and close like a clam shell by some means controlled by the user when used for picking debris.

Bricker and Dirksen both have a main rake head overlapped with an auxiliary head in the raking position, both heads made to open and close in a scissors-like fashion by some means when used for picking debris.

Hsu and Darnell both have a rake head that splits in the middle along the line of the rake handle and can fold inwardly and unfold outwardly by some means controlled by the user when used for picking debris.

The applicant wants to point out through the above examples that even though the essence or the basic idea is the same for each of these pairs of patents, the more recent patent was still granted because of a difference in the connecting means and/or the method of operation during the picking process. The difference may not even be construed as an improvement. It may even be more complicated, more costly to manufacture, and more cumbersome to operate. It is just different.

Following the same line of thought above, connecting means for movable elements play a crucial role in the patentability of an invention. What makes the inventions we are comparing unique over other prior art is that they both have side-by-side rake heads and some means to hold and detach these rake heads. The manner of detaching and connecting of these side-by-side rake heads form an integral part of the invention, even more so than the raking and picking capability. This is what will tell the two inventions apart. The handles of both inventions play a crucial role in the process of

detaching and connecting. At this juncture, the applicant has shown that the handles of the two inventions are non-equivalent.

Next, the applicant will tackle the task of arguing why the connecting means of the present invention is not equivalent to that disclosed by Mitchell. Elements (j) and (l) refer to the first and second connecting means respectively. Mitchell mentions towards the end of his disclosure that other connecting, alignment and rotation preventing means on the rake parts other than those shown can be employed. This idea is readable in every patent whether it is mentioned or not. It does not mean that every possible connecting, alignment, and rotation preventing means in the field of dual rake heads and dual handles disclosed in the past, being disclosed in the present and will be disclosed in the future other than those shown in the specification are covered by this patent either as a claim or as prior art. **Section 112 of the patent laws (35 USC112) paragraph (6) states: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."** Only those means that are equivalent, that is, those that perform the same function in the same way to achieve the same result as the means described in the specification can be covered by the claim. This is why the applicant went to great lengths in disclosing as much as possible the many embodiments, connecting and telescoping means for the present invention. If Mitchell had other connecting means in mine that are not equivalent to his semi-circular grip and hook and opening, it would have behooved him to disclose those in his patent as well.

In fairness, the applicant will cover a one-on-one comparison of the connecting and abutment means of the present invention and Mitchell's. Other structures that have to be present in order to make the particular connection work will be covered separately. The necessary provision for these other supporting structures will only further support the non-equivalence of the connections being compared. **Of all the possible connecting means disclosed in the present invention, the following are not equivalent to any disclosed by Mitchell:**

1. **First connecting means**: a resilient member on a portion of the grip handle in one rake unit that is substantially perpendicular relative to the elongated portion of the handle and is positioned to grasp the equivalent portion of the grip handle in the other rake unit. This resilient member may be on either grip handle. Since Mitchell's semi-circular rib is formed on the inner walls of the semi-cylindrical member, it can be on that kind of handle only. The present invention's resilient member has a longitudinal axis substantially normal or perpendicular to the longitudinal axis of the handle (elongated portion of). Mitchell's semi-circular rib has a longitudinal axis parallel to and substantially coincident to that of the other handle.

If the resilient member of the present invention is on the first rake unit, it connects the two rake units and deters rotation of the second rake unit directed along a lateral axis - from front to back or scissors-like during a raking operation. **In other words, it performs a connection and an abutment function**. Separation or rotation of the two rake units along the azimuthal axis or sideways is only partly deterred because that is where the opening of the resilient member is facing. By having this opening facing sideways, the two units can be quickly and easily separated sideways for picking debris. The direction of motion is also in line with the natural human tendency to snap something sideways in order to break it apart.

In contrast, Mitchell's semi-circular rib by itself connects the two rake parts but only when not in use for raking. It does not deter rotational movement along the lateral axis of the second rake part. The upward raking force is right in the line of the opening of the semi-circular rib. Vigorous raking or raking wet leaves can generate enough upward force to detach the rib's grip from the first rake handle. As mentioned before, the longitudinal axis of the first rake handle coincides with that of the semi-circular grip. This allows for rotation in the azimuthal axis as well but this is irrelevant in Mitchell because his detaching operation does not involve rotation along this axis. Rotation along the lateral axis, on the other hand, may be advantageous because it allows for easy separation of the two rake parts when the second rake handle is moved in a clockwise direction along a lateral axis. However, it becomes a disadvantage during raking when the rake parts should not be detached from each other. **The semi-circular rib does not perform an abutment function**. Abutment

means comprising the hook and opening connection means and complementing inner edges of the two rake heads are needed to secure a more reliable hold during the raking process.

The difference in the degree of deterrence in the lateral axis provided by the resilient member of the present invention and that of Mitchell's semi-circular rib is particularly important because the raking motion involves rotation along a lateral axis, the axis being the connecting means closest to the ground. Therefore, to prevent parts from getting detached inadvertently during vigorous raking motion, the connection between them should be one that can withstand motion in that lateral axis. **The present invention's first connection means deters motion in that lateral axis to a greater extent than Mitchell's semi-circular grip.** By not completely deterring motion in the longitudinal axis, the two rake units can be easily detached by just a sideways snapping motion. Vigorous raking alone will not inadvertently detach the two rake units of the present invention. Mitchell's might, unless another connection like the hook and opening is also used. **Therefore, the present invention's first connection means is not equivalent to Mitchell's semi-circular rib.** Another non-equivalence argument touching on transferability of the first connecting means versus the non-transferability of the semi-circular rib is further argued in # 3 (third connecting means) below. Still another non-equivalence argument touching on the abutment function of the first connecting means is further argued in #3 below. What is argued for the third connecting means also holds for the first connecting means and vice versa.

2. **Second connecting means**: ranges from a cord-like member to chain links, to rings rotating around the rake handle to D rings, screw eyes, somehow associated to work with an aperture or equivalent in the other rake handle – anything that allows at least one of the handles to be rotated until the rake heads are substantially facing each other and to be swung freely toward each other. Since this means does not completely detach the two rake units this cannot be equivalent to any means in Mitchell regardless of the structure or the way it works.

3. **Third connecting means** : a resilient member disposed on the left or right rake handle with its longitudinal axis parallel to the elongated portion of the other rake handle. Mitchell's semi- circular rib has a longitudinal axis that is coincident, thus parallel to the first rake handle as well. Because the rib is an inherent part of the semi-cylindrical second handle, it cannot be transferable to the first handle in order to hold the second handle instead unless the first rake handle is also made semi-cylindrical and sized to fit over the second rake handle. Mitchell does not teach about a second handle that is not semi-cylindrical nor that the semi-circular rib can be disposed somewhere else other than the inner walls of a semi-cylindrical handle. This handle was meant to cover the tubular member and/or a portion of the first handle as an alignment means, therefore it has to be semi-cylindrical. For the present invention, this resilient member may be used to connect two cylindrical rake handles producing a visible two-handle arrangement. Mitchell's semi-circular rib is used to connect two handles where one handle is semi-cylindrical and covers another, thus producing an illusion of a single-handle arrangement.

Although the difference in the cross sections of the handles and the resulting appearance of the connected rake parts are mentioned here, they should not be construed as arguments or necessary contributing factors toward the non-equivalence of the present invention's third connecting means to Mitchell's semi-circular rib. The resilient member and the semi-circular rib both perform a connecting function but they do not do it in the same way even if they can produce the same results (which they do not because the third connecting means connects and abuts). The mere fact that they function in diffcrent ways is enough to render them non-equivalent.

If the third connection means is used in a side-by-side handle arrangement wherein the handles lie on the same plane as the rake heads, the third connection means not only connects, it abuts as well. The upward force on the rake head resulting from the raking motion is translated upward normal to the axis of the connecting member and against a side of the connecting member normal to the line of entry of the other handle. In Mitchell, the upward force is translated upward also normal to the axis of the semi-circular rib but right in the line of entry of the first rake handle, causing the first handle to be relcased or dropped out if thc rib is raised even

slightly, assuming that there are no other connecting means. The semi-circular rib does not perform an abutment function in the raking operation. The rib cannot be arranged any other way as will be explained further later. The third connection means abut in a side-by-side handle arrangement wherein the handles lie on the same plane as the rake heads.

**4. Another connecting and abutment means that do not have an equivalent in Mitchell comprise a snap/spring button and aperture combination on either a tube or a gripper as shown in Figs. 10-A to 13-BR.** This alone is sufficient to connect and abut the rake heads without a first, second or third connecting means or partially overlapping rake heads. This is why no specific connecting means is included in the main claim but this will be discussed later. The applicant is going to still argue why the snap/spring button and aperture combination is not equivalent to Mitchell's hook and opening combination just to completely erase any doubts. After all, an aperture is a kind of opening.

According to Webster's Third International Dictionary, a hook is a piece of metal or other tough material formed or bent into a curve or at an angle for catching, holding, sustaining, or pulling something. Mitchell's part # 91 on the first rake part is aptly called a hook because it has a forwardly projecting tip with an angled end, part # 93. This end is designed to rest on a ledge, part # 99, in the opening, part # 97 of the second rake part. All the other little nooks and crannies in the hook and in the opening coincide to form an abutment means that prevent rotation directed laterally to the longitudinal axis of the whole rake or side to side. The snap/spring button of the present invention is not a hook. It is a fastener that has a dome-shaped button head powered by a spring. The head is made to lodge into an opening slightly bigger than the cross-section of the button head. The button head is made to remain lodged in the opening by the compressive force exerted by the spring underneath the button. The spring can be of a helical or flat type. Structurally the hook and opening combination is not the same as the snap/spring button and aperture combination. **The following will show why the hook and opening combination and the snap/spring button combination are not equivalent:**

**Function:** Mitchell's hook and opening combination is used to detachably connect and abut the two rake parts.

The present invention's snap/spring button is also used to detachably connect and abut the two rake units.

**Ways to achieve function:**

To connect the two rake parts, Mitchell's second rake part which has the opening is grasped and brought towards the first rake part that has the hook. It is then rotated clockwise and forward relative to the first rake part in order to make the opening more accessible for the hook to enter into from behind. The hook is made to rest on a ledge in the opening and the second rake head is rotated counter-clockwise until the semi-cylindrical handle rests on the tubular member. All the other nooks and crannies in the opening and on the hook are complementary, thereby abutting the two rake parts. To detach, the connecting steps are performed in the reverse order.

The snap/spring button of the present invention is inside a member of the second rake handle (Mitchell's on the first rake head), its button head outwardly protruding from a first aperture thereon. Only the button head is exposed. Mitchell's entire hook is exposed. The second aperture is on a connecting means on the first rake handle (Mitchell's on the second rake head). This connecting means can be a gripper or a tube capable of receiving a member of the second rake handle where the snap/spring button is lodged. This member is inserted into the gripper or tube; its protruding button head is depressed by the edge of the gripper or tube and remains so until it clears the second aperture whereupon the compressive force is released and the button head engages into the aperture. It automatically remains there until the user deliberately pushes it down during the detachment process. The user uses his/left fingers of one hand to depress the button head while the other hand pulls out or snaps off the second rake handle from the first rake handle. There is no necessary connection in the rake head that can limit the detaching motions in either the tube or the gripper connection.

It is obvious that the hook and opening combination does not work in the same way as that of the snap/spring button and aperture combination. This alone renders the two connecting and abutment means non-equivalent.

**Results:**

After the connecting steps above are performed for Mitchell, the first and second rake parts are connected and abutted but only from rotation along the longitudinal or azimuthal axis and from further counter-clockwise rotation along a lateral axis. This is all right during the raking process because the raking motion involves upward pressure on the bottom of the tines, pressure that can cause counter-clockwise rotation of the second rake head. Without the semi-circular grip from the semi-cylindrical handle, downward pressure on the tip of the rake head however can rotate the rake head back clockwise, dislodge the hook from the opening, and consequently the semi-cylindrical handle from the tubular member. Also, after a number of detaching and attaching operations, the hook can get stretched out or chipped such that the small abutting parts no longer coincide, thus compromising the connecting and abutment means. The hook may even get broken and/or the opening get clogged with debris from vigorous raking and picking. The hook and opening just seem to be in a very vulnerable location.

The snap/spring button and aperture combination of the present invention connects and abuts the two rake units completely in all directions. There can be no inadvertent disconnecting because the button head has to be deliberately depressed in order to detach the units.

Mitchell's crucial connection means are on the rake heads while the present invention's are on the rake handles. The rake heads are subjected to so much wear and are far from the user's line of sight. Mitchell's claims do not specifically recite where in the rake part the location of the hook and opening combination is. However, looking at the figures and considering the physical structure of the parts, where else could it fit? It cannot be inherently implied that the hook and opening means of connecting and abutting can be anywhere other than on the rake heads.

Because the ways to achieve the function and the results are not the same for both types of rakes, Mitchell's hook and opening combination and the present invention's snap/spring button and aperture combination are definitely not equivalent.

As shown in Figs. 69-A through 72-D, the first connecting means can be further equipped with an aperture while the first or second portion of the grip handle can have a snap/spring button. To avoid confusion, this combination will not be referred to as the first connection means but rather a snap/spring button and aperture combination.

**5. The present invention actually also has its own protrusion and cavity combination as shown in Figs. 9-A, 9-R', and 9-L'.** This is now going to be argued as non-equivalent to Mitchell's hook and opening. The protrusion and cavity combination of the present invention plays a supplementary role in connecting and abutting the two rake units. Including it onto the overlapping rake heads can be advantageous for some versions of the present invention just to further deter the rake heads from separating due to vigorous raking. From experience using a prototype of one version, its absence from the partially overlapping rake heads is not noticeable. Mitchell's hook and opening combination on the other hand, is one of the most crucial connecting means for the two rake parts. The semi-circular rib alone is not reliable during the raking process. The hook and opening combination and the rib are both necessary for a secure and reliable connection.

Because of the minor role that the protrusion and cavity combination of the present invention holds, it does not have to meet exacting dimensions like the hook and opening combination of Mitchell. It is advantageous to use in all versions and particularly in versions wherein the rake handles are on top of each other(overlapping). It is a relatively loose connection in order to accommodate connecting motions in a side-by side arrangement and in an overlapping one. The cavity is large relative to the protrusion so that the user does not have to strain his/her body or eyes just to engage the protrusion into the cavity. Simply bringing the hand grips of the two rake units close together can already define the correct position of the protrusion prior to entry into the cavity. The protrusion on one of the rake heads is engaged into the cavity on the other rake head by simply overlapping the inner side of the rake heads. Then the hand grip of the rake unit with the

protrusion is pulled backward (or the hand grip of the rake unit with the cavity is pushed forward) until the protrusion latches onto an edge of the cavity, the first and second portions of the hand grips now substantially adjacent each other, and the first connection means snaps and holds the two rake units together. Unlike Mitchell, there is no clockwise or counterclockwise rotation of the second rake unit during the process. This difference in the way the protrusion and cavity means of the present invention and the hook and opening means of Mitchell works is already enough to renders them non-equivalent.

**The abutment means consisting of partially overlapping rake heads is not equivalent to Mitchell's**. First of all, the overlapping rake heads comprise an abutment means and not a connecting means. There is no abutment means element in Mitchell's main claim. Subsequent arguments will serve mainly to support novelty and unobviousness of the present invention over Mitchell and not to overcome its main claim. For abutment, Mitchell has a bottom flange on the inner side of the first rake part and an inner edge on the inner side of the second rake part. The inner edge rests on the bottom flange. Without the hook and opening connection in the rake head, this abutment will not work to prevent the second rake head from rotating along the longitudinal axis. Nor will it work to prevent rotation along a lateral axis with the semi-circular grip connection alone. This is because the raking motion can push the second rake head upward and consequently snapping off the semi-circular grip from the first rake handle. With partially overlapping rake heads on the other hand, especially where the second rake head is partially overlapping the first rake head, the portion of the first rake head in the "underlap" serves to absorb some of the upward pressure that could have been directed to the second rake head during the raking process, thus help in abutting lateral rotation. Mitchell's flange does not touch the ground where the bulk of the debris is. It cannot therefore help to absorb some of the pressure directed towards the second rake head. In addition, the flange contributes almost nothing to the pick-up volume when the rake parts are used in the pick-up mode. Mitchell's disclosure does not teach toward the extension of the flange to ground level. The partially overlapping sections of the rake head in the present invention serve not only to abut the two rake units but also to increase the individual rake span of the units, thus, allowing for greater pick-up volume. The

overlapping section also makes the first rake unit nice to use even by itself as a rake because it contributes to a balanced weight and look for the rake head. This is one of the reasons why it could be advantageous that the two rake units be also detachable. Even when one part becomes unusable, the other part may still be used. That is why, as long as the detachable version of the patent invention overcomes prior art (which it does) it should also be allowed.

**Another abutment means that do not have an equivalent in Mitchell is the recessed section on the handle that is housed inside the gripper when the rake units are in joined state (Fig. 1-C, part # 100-60R' is one of them).** This section plays an important role in preventing the sliding of the rake handles relative to each other along the longitudinal axis of the gripper. It also supports the mounting means for the gripper making it more firm and unwielding as it abuts the rake units during the raking process. Mitchell's abutment comprise the hook and opening combination and the inner side walls of the rake heads. Both of these are on the rake heads and do not act on any resilient member like the present invention.

**Again, inorder to overcome a 35 U.S.C. 102 (e) rejection, every element in the present invention must be found expressly or inherently in one prior art. The handle of the present invention, the first connecting means, the second connecting means, the third connecting means, the snap button and aperture combination, the overlapping rake heads, the recessed section on the handle, and all their equivalents are not found in the Mitchell patent. The presence of any one of these elements in the main claim will already render the claim novel over Mitchell.**

**To overcome a rejection based on 35 U.S.C. 103(b) (obviousness) one should show why the modifications are not obvious to one of ordinary skill in the art at the time the invention was made.**

1. Someone with ordinary skill in the art would probably be one who works in a hardware store that sells rakes and other garden tools and all sorts of hardware. None of the tools and hardware in such a store can lead someone to come up with this invention.

All garden tools come with a simple elongated member for a rake handle. As a matter of fact, one can see the short semi-cylindrical member with a semi-circular rib and an upturned rear end exactly like Mitchell's in a dustpan and broom set in any hardware store. The applicant has seen that set in a few stores and catalogs since several years ago. There is no handle in any of the tools there that has a hand grip that functions similarly to that of the present invention. One might see grippers for holding elongated handles against a wall. These are also sold in a hardware store. One might see their equivalents in several other prior art as a means of holding two elongated members together. But none of these grippers have been used vertically to connect two handles horizontally as was done in the present invention. And the fact that this vertical components surprisingly also offer a means by which the user can handle a tool with greater comfort never before offered in the field of rakes and picker-uppers, definitely supports the claim that the present invention is unobvious, novel, and thus, patentable. No one has thought that lengthening a gripper, putting a hole in it, and adding a snap button would provide a connection and abutment means for a side-by-side dual rake garden tool. Snap buttons are usually used to connect telescoping tubes, adjust tube lengths, and the like. To use them to connect tubes side by side is not obvious. Exposure to all the separate components of the present invention has not led someone with ordinary skill in the art to come up with a handle comprising of an elongated member and a hand grip and/or arm grip and the connection and abutment means that can go with it. It is not obvious.

And what better use is there for such a hand and arm grip than for picking up material- like leaves for instance? A rake with dual handles and dual rake heads. At the time the creative idea came up, the applicant could not have been aware of Mitchell's disclosure, filed only several months prior to the applicant's.

2. Another person who might have more than ordinary skill in the art would be one who manufactures rakes. What have they come up with in the commercial market? There is one rake that has a rake head that can fold in half toward each other when picking up leaves. There is another rake that comes with a separate fan-like picker-upper for the other hand that is made to hang over the rake head while raking. There is also a dome-shaped one that opens up to pick leaves and closes to hold them on the way to a trash bag where it is opened again to release the leaves. There is also even a pair of giant

picker-uppers to pick a voluminous amount of leaves but the user still has to stoop while doing the task. Indeed the market is replete with raking and picking up devices. However, none of them function like the present invention, nor can any render the present invention obvious.

3. The second connecting means used in conjunction with an aperture or its equivalent disposed on the upper end of one of the rake handles is also novel and unobvious. Several second connecting means choices comprise a chain, a flexible cord-like member, rings, and screw eyes. These fasteners are available in a hardware store and can be easily repaired and replaced when worn out or damaged. Yet no one has thought of using them for the purpose of the present invention. Prior art in the field of rakes equipped with pick- up partners is replete with intricate and complicated connectors that allow the connected parts to move along one dimension only - usually in a scissors-like fashion. This greatly hampers the movement of the rake part and the pick-up partner relative to each other. This is why the pick-up partners can only be positioned over or above the rake head – not side-by-side like the present invention. These prior art connectors are also difficult to repair and replace when damaged. No one before has thought that when this simple second connecting means is augmented with another simple connection means like a resilient member on the handle, a fully functioning picking rake can be created. No one has also thought that when this simple connecting means is augmented with just an abutment means like partially overlapping rake heads, a functional rake head can be created.

4. The partially overlapping rake heads idea is not obvious either. Mitchell's flange on one of the inner sides serves mainly to house a hook and opening connecting means. Adding an extra utility by having an extended rake head instead of just a flange is not obvious. As mentioned earlier the overlap further serves to balance the weight and look of each of the rake units so that they can be used separately. Foreseeing the consequences and providing for them beforehand just in case only one of the rake units is rendered useful (when the present invention's or Mitchell's second rake part is broken or misplaced) is not obvious.

**All the connection means of the present invention are disposed on the handles of the present invention where they can be manipulated by the user without**

**stooping. In Mitchell, the connection means are divided between the handles and the rake heads. The hook and opening connection in the rake heads is effected by a clockwise and counter-clockwise rotation in a lateral axis such that Mitchell's semi-cylindrical handle has to be positioned only on top or over the first rake handle. It cannot be covering the first rake handle from the side. The hook and opening abuts the rake parts from moving side to side, therefore, the semi-cylindrical handle cannot be released from the first rake handle sideways without wrecking the hook and opening combination. The present invention, on the other hand, can have the handles on top of each other, side by side or simply substantially parallel and can still be connected and detached. This is because there is no tight connection means on the rake heads that could have prevented motion in some directions. The overlapping rake heads are free to slide past each other during the detachment operation. The grippers on the handles can be positioned to face in the direction where the other member for gripping is coming from. Therefore, the present invention is more flexible and can cover a range of rake handle designs to suit users. The figures in the application present just some of them. This flexibility accorded by the combination of connecting and abutment means supports the contention that both versions of the present invention is definitely not obvious and is going to provide great utility to a lot of consumers, thus, should be allowed as claimed.**

5.**The present invention is not obvious over Mitchell also because it solves a different problem.** The present invention is meant to provide an alternative means by which people can dispose of their gathered leaves without stooping and without the undue strain on the arms and hands associated with the task. A handle with a hand grip and/or arm grip positioned closer to an upright user solves the problem of stooping and undue hand and arm strain. Having two such handles each with rake heads that are easily separable in one functioning rake makes the raking and disposal of yard debris more bearable.

The short second rake handle on Mitchell however does not provide a solution for the stooping problem. It is grasped to pick up leaves but the user still has to stoop to do the task. The picking operation is no different than one already done in prior art. The short second rake handle serves the same purpose as those picker-uppers that are

basically shaped like rake heads attached over the rake head in some rakes and completely detached only come pick-up time. A dustpan with the same short handle and detached the exact same way as Mitchell's can serve the same purpose.

Although Mitchell does not teach about lengthening the second handle, let's pretend that the second handle is lengthened and equipped with more semi-circular ribs. The manner in which Mitchell's two rake handles is grasped is no different than that being done in prior art. Two ordinary rake units, both already with long handles and each having a full size rake head could be used instead for a larger pick-up volume. And even if the second rake handle is lengthened, the user still has to stoop to make the hook coincide with the opening on the rake heads below. In other words, Mitchell's second rake part regardless of the length of the handle contributes marginally in terms of providing a different if not better way of picking up debris.

Another use for Mitchell's short handled second rake part is as a small rake for tight spots. There are already so many tiny rakes out there used for such tight spots that the contribution toward this field is also marginal. And couldn't the user just slip any small rake in his pocket ready to be taken out for use in picking or for tight spots? If this small second rake part gets misplaced or broken while being used with or apart from the first rake part, its marginal contribution to the picking-up solution is gone as well. The remaining first rake part can still be used as a rake but it will be unbalanced and it will look queer.

6. Another argument to support patentability of both versions of the invention is the elimination of a connecting element. Mitchell requires three elements namely: a semi-circular grip, a flange, and a hook and opening combination on the flange to effect a reliable and secure connection and abutment means for raking. The present invention needs only the following combinations each consisting of two elements to work as effectively as Mitchell in the raking mode: a) partially overlapping rake head plus the first connection means, b) partially overlapping rake heads plus the second connecting means, c) first and second connecting means, d) snap button and aperture connection means, and e) first and third connecting means. The simple partially overlapping rake heads can easily compete with the flange with the hook and opening combination in terms of utility and cost.

7. Cost-wise, the present invention can be more cost effective than Mitchell's. Mounting the hand and arm grips to the elongated member can be done with screws, rivets, or bolts, by welding, snap buttons, clamps, friction generator, or other state of the art joiners. It can also be fabricated along with the elongated member as one piece. It can also be fabricated along with the elongated member and the rake head as one piece. Attaching the grippers can be done by screws, rivets, bolts, by welding, or again fabricated as an integral part of the handle grips. Mitchell's second rake part can and will most likely be fabricated as one piece also. Mitchell's disclosure does not teach how the elements of each rake part are put together. The disclosure simply shows the completed parts. The rake head will most likely be made of plastic because the hook and opening arrangement would be too cumbersome to weave into a rake head made of bamboo or metal. If the hook becomes chipped or deformed from use, the whole second rake part has to be replaced in order to secure it to the first rake part. The cost of tooling to produce the present invention or Mitchell's is difficult to predict accurately at this point. However, consider also that Mitchell's hook and opening and aligning parts have to meet more precise dimensional requirements than the present invention's partially overlapping rake heads, grippers and hand grips in order for them to work cooperatively.

The applicant considers it relevant to point out also that although the figures in the present invention disclose mainly screw attachment means for the grippers, these should not preclude a broader claim that includes other equivalent attaching means where the grippers and the handle grips are molded as one piece, or where the grippers are tightly snapped onto the handle grips. **Broadening a claim by not specifying the exact attaching means like screws, weld, etc. inorder to include equivalent elements is not adding new matter. Claims cannot be negated or narrowed because of the manner in which the invention was fabricated. According to 35 U.S.C. 103 par. (a)"...Patentability shall not be negatived by the manner in which the invention was made."** The applicant is simply complying with the application requirements wherein the specifications must show how to assemble or make the invention. The applicant who does not bother to show how the parts of his/her invention can come together should not be more deserving of a broader claim. Using screws is the simplest way for the applicant to show the parts in exploded view and still effect a complete assemblage. Eliminating these

figures or details in the application would make the application non-compliant with patent application requirements.

If one also considers the value added, both inventions can boast of offering a rake with a picker-upper that is always at hand when needed. However, only the present invention has addressed the problem of users having to stoop in order to dispose of their raked debris. Nowadays, people are more health conscious and are willing to pay more to stay fit and healthy. Back savers of various kinds like wheelable backpacks, posture braces, back braces, lumbar supports, back massagers, exercise equipment, etc. are flourishing in today's market. The present invention is providing the first back saver of its kind in the dual rake head side-by-side arrangement. It is very likely that the market will value it, thus, rendering the cost to produce it less relevant. It is an accepted notion that manufacturers are more likely to commercialize a product if they can have some sort of exclusive right to it such as that derived from a patented invention. Thus, it would be more likely for consumers to avail of the benefits of the present invention if the applicant is granted a stronger patent broadly covering enough to preclude others who will just modify the invention but slightly and still not infringe.

The applicant have not yet perceived of a third use for any of the separate rake units but it could make a big contribution in the field of raking and picking-up yard debris.

**Claim 61** – This claim was contributed by the applicant. No reason was given as to why it was not allowed. The specification clearly supports it. The applicant is rewriting this claim and is submitting a clearer and more definite claim 80 covering the same idea. The applicant chose not to cancel this claim at this time to facilitate the comparison between this claim and its replacement claim 80.

**Claim 62** - This claim is a main claim patterned after the Examiner amended claim 57. It includes less elements than claim 57 but more than enough to render it novel and unobvious over Mitchell's main claim. The issue of possible infringement in case the

product is manufactured was also considered. The following elements from claim 57 are not included in the new main claim:

a) line 10....wherein the lower ends of the first and second rake heads have a plurality of prongs forming a first plane...
b) line 13....wherein each of the first and second grip handles form a second plane substantially parallel to the first plane...
c) line 18.....one of the first and second portions has a first connecting means for holding the right and left rake units in a side by side relationship along their inner sides...
d) line 22....the lower ends are removably connected to the respective upper ends of the first and second rake heads....
e) line 24....aperture on one of the upper ends of the first and second rake heads through which a second connecting means is extended.....
f) line 26.....wherein at least one of the first and second grip rake handles are located at a midsection of at least one of the first and second rake handles...

**Justification for the Differences Between Claim 57 and Claim 62**

A comparison of the present invention and Mitchell's entire patent (main claim and all the dependent claims) shown earlier reveal that the following elements are found in the present invention and not taught or covered by Mitchell either expressly or inherently:

a) a handle comprising of an elongated portion and a hand grip,
b) first connection means for joining the two rake units,
c) second connection means for joining the two rake units,
d) third connection means as connection and abutment means,
e) partially overlapping rake heads as abutment means,
f) snap button and aperture combination as connection and abutment means, and
g) protrusion and cavity combination as connection and abutment means.
h) interlocking hand grips as connection means (see Figs. 51-B, 52, & 53),
i) recessed section of the rake handles as abutment means

**Including at least one of these connecting means elements in the main claim would already render the claim novel and non-infringing. The elongated portion and the hand grip portion of the handle is very crucial because it is unique and novel, definitely unobvious, definitely non-equivalent to any handle in Mitchell, and is therefore included. "Connecting means for joining the two rake units " is also included so that the invention becomes functional. It is another element that is not equivalent to any in Mitchell's patent because it only covers those disclosed in the present invention that are non-equivalent. These two elements already overcome prior art with good measure.** Only one non-equivalent element is really needed in order to not infringe Mitchell's main claim. By patent law 35 USC112 par. (6) stated earlier, these connecting means are construed to cover only those disclosed in the application . Those that are non-equivalent to the "cooperating connection means" taught in the Mitchell patent further separates the present invention from Mitchell. These are the first, second, third connection means, gripper and snap button combination, and the protrusion and cavity combination with the partially overlapping rake heads. They are recited in the dependent claims.

The patent attorney consulted by the applicant suggested that the hand grips and the first connecting means be eliminated in claim 57. This is because the second connecting means already overcomes Mitchell. By the same token, the hand grip element in Claim 62 can also be eliminated. The non-obvious and non-equivalent connecting means is enough to overcome Mitchell's main claim. Therefore, if the hand grip element has to be in the main claim for reasons (other than to avoid infringement of Mitchell) that applicant is not made aware of, it can be a broad as possible. Ways of doing so include not specifying its slant and its location narrowly. The following changes and their accompanying arguments support this objective.

Line 10 – line 16 changes – The applicant prefers to use the plane of the rake head instead of the prongs as a starting reference point to describe the position of the grip handle. This is because some rake heads have prongs that do not extend even substantially perpendicular to the plane of the rake head. On some rakes, one cannot truly distinguish a dividing line between the plane of the prongs and the plain of the rake head as a whole. Some have prongs directed in more than one direction. This present invention

teaches about a rake head that can have prongs extending to the outer sides as well. These outer-side prongs are particularly advantageous when the picking rake is in the pick-up mode. If the plane of the rake head is substantially on an infinite first plane, then the grip handle is on a second infinite plane that intersects the first plane. The second plane is not necessarily perpendicular to the first plane. Please note that in claim 57, the second plane the hand grip is on is recited as substantially parallel to the prongs that are on a first plane. If one just changes the direction of the hand grip to one that is no longer substantially parallel to the prongs, there is no infringement. Or if one eliminates the prongs or changes slant relative to the rest of the rake head, there is no infringement. Although the drawings tend to show a substantially perpendicular relationship between the two planes, the applicant chose to broaden the claims to include those that are not substantially perpendicular as long as the claim does not fall into the realm of prior art. Broadening the main claim does not mean the addition of new matter in this case because the broadened claim still describes the present invention and still overcomes prior art.

Element (k) above as recited in line 22 of claim 57 is removed because it further restricts the claim needlessly by stating specifically that the lower ends of the first and second rake handles are removably connected to the respective upper ends of the first and second rake heads. Mitchell teaches a removable connection for the handle and the rake head of the first rake part. For the second rake part, the word "attached" is used which could mean that the handle could be either removable or molded with the rake head as one unit. Mitchell's disclosure does not even specify that it could be removably connected. The present invention disclosed the idea that the handles and rake heads can have a removable connection and can be fabricated as one piece. See Figs. 36-A through 36-C. Since reciting the word "removable" in the main claim of the present invention does not differentiate or overcome any element in the Mitchell patent, there is no reason why it has to be included. Adding elements that do not contribute to the effort of overcoming the reference is just narrowing the claim needlessly.

Deletion of line 24 of claim 57 - Adding the aperture and the second connecting means combination (as in claim 57) will define just the non-detachable version of the invention **needlessly,** therefore, it is not going to be included in the main claim. The main claim already has enough elements to define novelty and unobviousness without

infringing on Mitchell. **If one compares the non-detachable and the detachable versions of the present invention, the only difference is the presence of the second connection means. Both have grip handles. Both can have a first connecting means. Both are capable of accepting the same rake heads. If the second connection means is added, the non-detachable version is created. If the third connection means is added instead of the second, a detachable version is obtained. And if the overlapping rake heads are also used, the second and third connection means can be eliminated on both versions or the first and third connecting means can be eliminated on the non-detachable version without significant loss in utility. And if the gripper/tube and snap button combination is used, all other connecting and abutment means become unnecessary. That is why the detachable and non-detachable versions can be covered in one main claim that simply recites "... connecting means on at least one of the rake units for joining...." as was done in claim 62 and still overcome prior art.**

Lines 26-29 of claim 57 reads: "wherein at least one of the first and second grip handles are located at a midsection of at least one of the first and second rake handles, and the first and second grip handles are located substantially remote from the upper ends of the first and second rake heads,...". These lines are also not included in the main claim. According to Webster's Third New International Dictionary, the word midsection means " a section midway or about midway between the extremes." Because of the inherent utility of the grip handles, the location of the grip handles is crucial. They are based on the distance between the ground and the user's hand reach while the user is standing substantially upright. In the extreme case, someone can just fabricate a rake head so tall that it is not possible to use a grip handle disposed in the mid-section of either of the two handles. The grip handle will have to be close to the upper section of the tall rake head to be worthy of its existence. This kind of rake will therefore not infringe on the main claim even if everything else is copied. Also take for instance, a handle designed for use by a small child using a standard-sized rake head. The grip handle is also going to be close to the rake head as well. The idea that the location of the hand grips is not limited to the midsection alone is supported in the disclosure. The disclosure

submitted is replete with figures showing the grips to be adjustable anywhere along the length of the elongated member.

Therefore, the above lines are replaced with something that reads like this: "wherein the first rake handle comprises a first elongated member and a first hand grip and the second rake handle comprises a second elongated member and a second hand grip; and wherein the first and second elongated members each has a lower end and an upper end;... wherein the first and second hand grips each comprise a branch extending substantially transversely from their respective elongated members at a section intermediate the upper ends of their respective rake heads and the upper ends of their respective elongated members...".

Because the grip handles are unique to the present invention, its location makes no contribution to the effort of trying to overcome Mitchell's main claim. Specifying the location narrowly is only going to narrow the claim needlessly.

Another difference between claim 57 and the applicant's claim 62 is the clause from claim 57 (line 18) which reads: "...one of the first and second portions has a first connecting means for holding the right and left rake units in a side by side relationship along the inner sides when the picking rake is used.....". Claim 62 has instead: "...connecting means on at least one of the rake units for joining the two rake units towards the inner sides of the rake heads, the handles substantially parallel and next to each other, the lower ends of the rake heads aligned forming substantially one functional rake head, each rake head contributing to the total raking span; and...". This description is more comprehensive because it will cover the other variations disclosed in the later part of the drawings and descriptions in the application. These other variations may be preempted by the dominant versions in the earlier parts. For example, Figs. 48-A through 53 show the elongated portions of the handles on top of each other or substantially parallel and next to each other. Mitchell's second handle is also on top of the first handle but this relationship is not what makes the present invention unique over Mitchell. It is the handle itself plus the non-equivalent connecting and abutment means.

There is also the addition of lines 37-38 which recite "wherein the first and second infinite planes each contain a common intersecting line.." This is mainly to clarify

that the hand grip such as that shown in Fig. 6-A is still on the second infinite plane, it being on said intersecting line.

**Claim 63** (new) – This is a claim dependent on claim 62. This is because some means can both connect and abut either by itself or in conjunction with another connecting means.

**Claim 64** (new) – This claim dependent on claim 62 recites the first connecting means.

**Claim 65** (new) – This claim dependent on claim 63 recites the recessed portion on the rake handle as abutment means.

**Claim 66** (new) – This claim dependent on claim 64 recites a snap button and aperture form of connecting means added to the first connection means.

**Claim 67** (new) – This claim dependent on claim 63 recites the overlapping rake heads abutment means.

**Claim 68** (new) – This claim dependent on claim 62 recites the second connection means.

**Claim 69** (new) – This claim dependent on claim 62 recites the addition of the first and second arm leverages producing another version of the invention.

**Claim 70** (new) – This claim dependent on claim 69 recites the addition of a first connecting means to the hand grips.

**Claim 71** (new) – This claim dependent on claim 69 recites the addition of a first connecting means to the arm leverages.

**Claim 72** (new) – This claim dependent on claim 69 recites the extension of the hand grips to meet their respective arm leverages.

**Claim 73** (new) – This claim dependent on claim 62 recites the addition of a third connecting means to the elongated members.

**Claim 74** (new) – This claim dependent on claim 62 recites the resilient member, snap button and aperture combination form of connection and abutment means.

**Claim 75** (new) – This claim dependent on claim 62 recites the tube, snap button and aperture combination form of connection and abutment means.

**Claim 76** (new) – This claim dependent on claim 62 recites the telescoping capability of one of the elongated members.

**Claim 77** (new) – This is a second independent claim covering just the handle.

**Claim 78** (new) – This claim dependent on claim 77 recites the extension of the hand grip to meet the arm leverage.

**Claim 79** (new) – This claim dependent on claim 77 recites the telescoping capability option on the handle.

**Claim 80** (new) – This claim dependent on claim 57 is a clearer and more definite recitation of what is covered in the currently cancelled claim 61. It recites the telescoping capability of the picking rake in claim 57.

Based on MPEP 802.01 the handle and the picking rake are not independent and not distinct . Firstly, the handle is related to the picking rake in design and operation, therefore not independent. Secondly, the handle is not patentable in a separate application because in light of the present invention, it is no longer novel and unobvious. The rake

handle does not lose its identity when it is made part of the picking rake. It has no other use than to pick up yard debris. Therefore, the handle and the picking rake are not distinct. If the applicant files a separate divisional application, both the divisional and parent patents can be held invalid for double patenting. According to MPEP 806.05 "if two or more related inventions are not distinct, restriction is never proper. If non-distinct inventions are claimed in separate applications or patents, double patenting must be held, except where the additional applications were filed consonant with a requirement to restrict in a national application." Since the handle and the picking rake are non-distinct, it would be fitting and proper to allow them both in the same patent. Claims for just the handle have been submitted in the original application and also in the response to the first Office Action. No restriction requirement was imposed on them then perhaps because it is not proper anyway. Therefore, a restriction is not expected at this point in the prosecution. There would be no serious burden on the Examiner to re-examine the claim on the handle on its merits. The references cited pursuant to the examination of the present invention included handles within the search field of garden tools and floor cleaning tools. The claim for the handle lies within the same field of search. The Examiner has already gone over these references while examining the present invention. It is necessary to include this as an independent claim in order to preclude others from copying the same unique features of the handle and changing just the connection means. Otherwise, one can just pick and choose parts from Mitchell and from the present invention and not infringe. In the extreme case, one can just change Mitchell's handle to that of the present invention and not infringe. Also, one can just eliminate the connecting means of the present invention and not infringe.

The applicant will present arguments that will support the patentability of this independent claim.

**Novelty and Unobviousness**– A search of prior art reveal the following:

1. **Jenkins** (Pat.# 2,536,607) (1951) teaches about a rake handle that has a hand grip which when grasped acts as a lever to prevent the handle from rotating about its axis while the rake is being used. The hand grip is transversely disposed from the longitudinal axis of the rake handle. The rake handle also

includes a second grip handle at the upper end that can move freely along the longitudinal axis and rotatably about the axis. There is also the set screw means to adjust the angular position of the handle with respect to the rake head.

Here, the hand grips of the present invention and Jenkins are not equivalent even if they look almost the same. In the raking mode Jenkins' hand grips perform the same function in the same way and with the same results as the arm leverage of the present invention. In the pick-up mode, however, the arm leverage of the present invention no longer has an equivalent in Jenkins'. Jenkin's second grip handle is not equivalent to this arm leverage because it serves a different function. Therefore, the present invention is novel over Jenkins. **The second grip handle is meant to be grasped by the other hand and not for the forearm of the same hand grasping the hand grip. Since both hands are already occupied with just one handle, the idea of just having another handle for another hand cannot be implied**. The idea of using Jenkins' rake for picking up yard debris cannot be implied. Consequently, the addition of an arm leverage or the idea of a hand grip and arm leverage combination is not obvious over Jenkins.

2. **Callis** (Pat.# 4,477,114) (1984) teaches about a rake handle that also has a hand grip for grasping and a strap on the handle disposed above the hand grip to attach to the forearm of a user. The hand grip consists of two branches, each transversely disposed adjacent on opposite sides of the longitudinal axis of the rake handle. There is also a set screw means to adjust the angular position of the handle with respect to the rake head for addressing the angle of attack when picking up debris.

   Here, the arm leverage of the present invention and Callis' hand grip can be arguably equivalent in function, manner of use, and result when used in the raking mode. If you look closely, however, Callis' hand grips consists of two branches on opposite sides of the handle and on the same plane as the rake head. The symmetry on both sides of the rake handle does not lead one into

thinking of another handle that can be attached to this rake unit. It looks complete by itself. The inner hand grips are obviously in the way if two rake units are attached.

In the picking mode, the hand grips of the present invention and that of Callis can be equivalent. However, the arm leverage of the present invention is not equivalent to the flexible adjustable strap on Callis. They may perform the same function (to provide arm leverage) but not in the same way and do not produce the same results. The arm leverage of the present invention is rigid. The user simply slides his arm into the open portion that is already big enough to accommodate the biggest arm. There is no strap to fasten and unfasten. A flexible strap does not provide the same leverage as a rigid one. The attachment point of the strap to the handle is absorbing all tension resulting from the lifting operation and will wear out easily. The handle will have a tendency to sag towards the rake head during the lifting operation unless more lifting force is exerted by the user on the hand grips to compensate. Please note that the user's five fingers are divided between the two hand grips (with no flanges) on opposite sides of the handle. If they were all on one side, preferably the side below the handle in the picking operation, the user could impart more lifting force with his hand. The intersection between the handle and the hand grip will act as a flange.

Callis does not teach about an embodiment that has only one hand grip on one side of the longitudinal axis. And imagine the inconvenience involved when one has to fasten and unfasten Callis' flexible strap if the shifting to different modes have to be done frequently. After all, it is the frequent shifting from raking to picking up modes and vise versa that can lead one to desire a picking rake like the present invention. **A flexible strap is not designed to have nor to teach a connecting means involving grasping or being grasped especially by a resilient member during the detaching operation. Imagine the effort involved in having to attach and detach two straps, one for each arm in several cycles in order to do a raking, gathering and picking up of yard debris in a hurry.**

The hand grip and rigid arm leverage of the present invention are not equivalent to the hand grip and arm leverage strap in Callis in either the raking mode or the pick-up mode. Based on the above arguments the present invention is novel and unobvious over Callis.

3. **Mencarelli et al.** (Pat.# 5,467,590) (1995) teaches about a rake handle that also has a first hand grip for grasping and extending transversely from the proximal (upper) end of the handle. A second hand grip is disposed spaced from the first hand grip and extending angularly relative to the first hand grip and the longitudinal axis of the handle. The rake head is asymmetrically disposed relative to the handle to allow the user to bring the handle closer to his/her body without interference with his/her feet.

   Here, the hand grip of the present invention and the second hand grip of Mencarelli are arguably equivalent when used in the raking mode. In the pick-up mode, however, the arm leverage of the present invention is not equivalent to Mencarelli's first hand grip. **Like Jenkins' second grip handle, Mencarelli's first hand grip is not meant for arm leverage. It is meant for the user's other hand.** The arguments presented under Jenkins also apply here.

4. **Hoffman** (Pat.# 5,529,357) (1996) teaches about a leverage enhancing assembly for attachment to the handle of a mop, broom, rake, or similar tool comprising an arm clamp and a grasping shaft. The arm clamp is attached to the end of the tool handle proximate the user and is meant to secure the forearm of the user. The grasping shaft is for grasping the rake handle. The distance between the arm clamp and grasping shaft can be adjusted. The arm clamp consists of a semi-permanent substantially circular clasp that can be fastened together by Velcro or peg and hole combination or just left unfastened.

   If this leverage assembly were to be attached to a handle of a rake head, the grasping shaft can be equivalent to the arm leverage in the raking mode. The user will probably not use the arm clamp in the raking mode because the

raking motions will be awkward and tiring if done by only one hand. In the pick-up mode, the hand grip of the present invention and the grasping shaft can be equivalent. However, the arm leverage and the arm clamp are not equivalent. They have the same function (to provide leverage) but not in the same way and not with the same results. **Like in Callis, the user may have to unfasten the arm clamp before he or she can insert his or her hand prior to the arm through the circular clasp. He or she also has to fasten the clamp snug around his or her forearm. In the present invention, the user simply slips his or her arm directly through the opening. No unfastening and fastening, cycles are required. When two units are connected as shown in the present invention, shifting from raking to picking mode becomes fast, easy and efficient. It takes only one second to detach and another one second to attach the two units, literally at the snap of your fingers.**

The advantage of the present invention's arm leverage over Hoffman's flexible arm clamp and Callis' flexible strap is its rigidity. Rigidity provides not only more leverage; it also eliminates all the inconveniences associated with adjusting and fastening and unfastening cycles inherent in a clasp or strap. A flexible circular clamp may provide leverage in all three dimensions and may be desirable for some purposes because Hoffman intended this assembly for use with so many other tool heads. Some require motions that do not belong in raking or picking. Opening and closing a flexible clasp may not be as time consuming as fastening and unfastening a flexible strap but it still is a clasp and is still more time consuming to use than one that is not. From the figures in Hoffman's disclosure, one can infer that only one unit is used at a time and not in conjunction and in unison with another one for the other hand. If both arms are clasped to a handle, imagine the effort needed to do attaching and detaching cycles for each of the handles from the user. Furthermore, it is not designed to hold nor to teach any connecting means and to be grasped to perform the detaching operation of the present invention.

The present invention can provide leverage in the same number of dimensions and still leave a big enough opening for a forearm to go through. It can provide leverage in two and a half dimensions only and still provide all the leverage necessary in the raking and picking up process. The first half leverage dimension is manifested in the debris grasping process which involve pushing inward from the side to grasp the leaves. This is also useful during the gathering process. The second leverage dimension works in the lifting process where the downward pressure is skewed towards the rake head. The third leverage dimension works in the gathering process involving moving the debris closer towards the user.

Based on the above arguments the present invention is novel and unobvious over Hoffman.

5. **Blessing** (Pat.# 6,199,245) (2001) teaches about a multi-component handle comprising of sections that can be connected together using various connectors in a multitude of ways to obtain a handle configuration desired by the user for a particular operation.
   **A look at the sections comprising this handle or the disclosure in the text is not enough to make someone with ordinary skill in the art figure out a configuration such as the present invention even if he or she meant to make a pick-up handle.**

**Based on the above arguments, the rake handle is definitely novel and unobvious over the prior art, thus patentable.**

**Drawing Amendment Remarks**

The applicant has amended the drawings in compliance with the requirements set by the Drawing Review Branch. They were filed as a separate paper with a transmittal letter addressed to the Drawing Review Branch.

While in the process of redoing the figures, the applicant has noticed some obvious errors and omissions and took the liberty of correcting them. No new matter was added. Actually, the drawings sent with the application may already have the omitted parts because they might have been added on there at the last minute but not on the applicant's copy. These corrections involve the following:

Fig. 22 – There is a duplication on the use of part no.166-06. The applicant renumbered the lower one in the figure to 166-10 and accordingly made amendments to the specifications to incorporate this correction.

Fig. 33-B - According to the disclosure, Fig. 33-B is a perspective view of the assembled variation in Fig. 33-A with a retracted handle section. Fig. 33-A has a gripper on its left hand grip. This is missing in Fig. 33-B. Therefore, the applicant added on said gripper to Fig. 33-B.

Fig. 38-B – According to the disclosure, there is no Fig. 38-B. There are Figs. 38-BR and 38-BL which are exploded perspective views of the assembly of components of the right and left rake units of the picking rake in Fig. 38-A. And sure enough, no other figure but Fig. 38-B fit the description. The applicant renamed the right and left figures as Fig 38-BR and Fig. 38-BL respectively.

**Specification Amendment Remarks**

The applicant amended portions of the text in the Specifications in order to incorporate the terminology used for a clearer and more definite recitation of elements in the claims.

The rake handle is described as comprising of an elongated member and all the other branches extending from it.

The pick-up handle is clarified as being sometimes referred to as the hand grip.

The branch extending from the elongated member having the forearm support is clarified as the arm leverage in the claims.

A new paragraph clarifying that other sections of the arm grip can be a forearm support. The idea of the rake heads and hand grips as being on certain planes is introduced to facilitate understanding of the claims.

Several errors in the numbering of parts are corrected to reflect what is shown in the figures.

Some obvious ramifications are included in the Conclusion, Ramifications, and Scope of the Invention section.

The above do not constitute the addition of new matter.

**Conclusion and Conditional Request for Constructive Assistance**

Therefore, based on the arguments presented above, it is submitted that patentable subject matter as claimed is clearly present for both the picking rake and the rake handle. If the Examiner agrees but does not feel that the present claims are technically adequate, the applicant respectfully requests the constructive assistance and suggestions of the Examiner pursuant to MPEP 706.03(d) and MPEP 707.07(j) in order that the applicant can place this application in allowable condition as soon as possible and without the need for further proceedings. The claims written by the applicant are patterned closely to that of the Examiner's amendment claim/s and other patent references, so only minor changes

might be needed. Actually, according to the patent attorney consulted by the applicant, the claims appear to have been written by a patent agent.

Thank you.

Very respectfully,

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Date: 10/30/03

Inventor's Signature: Mary Ann Caneba